

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX LABORATORY 1337 S. 46TH STREET BLDG. 201 RICHMOND, CA 94804-4698

DEC 0 8 1999

MEMORANDUM

SUBJECT: Case R00S05, SDG 99300A

Results for Volatile Organic Compounds, 1,4-Dioxane, Anions, and Perchlorate

Analyses

FROM:

Brenda Bettencourt, Director

EPA Region 9 Laboratory (PMD-2)

TO:

Doug Frazer, Remedial Project Manager

Southern California Cleanup Section (SFD-7-3)

Attached are the report narrative, results spreadsheet, and tentatively identified compounds (TIC) reports from analysis of samples from the Whitter Narrows Superfund site. These data have been reviewed in accordance with EPA Region 9 Laboratory policy. Summary information for the data included in this report is as follows:

SITE/PROJECT:

Whittier Narrows Comprehensive

CASE:

R00S05

LABORATORY:

U. S. EPA Region 9 Laboratory

SAMPLE DELIVERY GROUP:

99300A

ANALYSES:

Volatile Organic Compounds (R9 Lab SOP 305)

1,4-Dioxane (R9 Lab SOP 307)

Perchlorate (Cal DTSC method, R9 Lab SOP 531)

Anions (EPA method 300.0)

A full documentation package for these data, including raw data and sample custody documentation, has been prepared and is being kept on file at the Region 9 Laboratory. Please contact Vance Fong of the Quality Assurance Program (PMD-3) to request review and/or validation of the data.

If you have any questions please contact Rich Bauer at (510) 412-2312, or Ken Hendrix at (510) 412-2321.

ATTACHMENT: Analytical Reports

USEPA REGION 9 LABORATORY REPORT NARRATIVE

CASE NUMBER:

R00S05

SAMPLE DELIVERY GROUP:

99300A

PROGRAM:

SUPERFUND

WNC9920

AB25380

DOCUMENT CONTROL #:

ESTW-9B-2762

ANALYSIS PERFORMED:

GC/MS Volatiles

DATE SUBMITTED:

December 3, 1999

SAMPLE NUMBERS:

Laboratory Laboratory Sample ID Sample ID Sample ID Sample ID WNC9901 AB25195 WNC9902 AB25196 AB25203 AB25204 WNC9903 __ WNC9904 WNC9905 AB25261 WNC9906 AB25262 WNC9907 AB25263 WNC9908 AB25264 WNC9909 AB25265 WNC9910 AB25266 WNC9911_ AB25267 WNC9912 AB25268 WNC9914 WNC9913 AB25269 AB25362 AB25364 WNC9915 AB25363 WNC9916 WNC9918 AB25378 WNC9917 AB25365

GENERAL COMMENTS

WNC9919 ...

Twenty water samples were received at the EPA Region 9 Laboratory during the period of 10/27/99 through 11/03/99 from the Whittier Narrows Superfund project.

AB25379

These samples were analyzed for volatile organics in accordance with the USEPA Region 9 Laboratory SOP 305, Volatile Organics Analysis with the addition of tetrahydrafuran to the target analyte list. In addition, all samples were reviewed for the presence of dichlorofluoromethane, 1,1,2-trichlorotrifluoroethane, acrylonitrile and 1-bromo-2-chloroethane. A single standard containing these compounds was analyzed on each instrument to establish the retention time, and mass spectra. No multi-point calibration or continuing calibrations were performed for these compounds. The mass spectra of any unidentified peaks with similar retention times to the above compounds were examined to verify the presence or absence of these compounds.

SAMPLE RECEIPT AND PRESERVATION

The cooler temperatures associated with the following samples was outside of the 2 - 6 $^{\circ}$ C temperature range when received:

Sample ID	Laboratory Sample ID	Date Received	Temperature
WNC9914	AB25362	11/03/99	9° C
WNC9915	AB25363	11/03/99	9° C
WNC9916	AB25364	11/03/99	9° C
WNC9917	AB25365	11/03/99	9° C

QA/QC AND ANALYTICAL COMMENTS

The following comments appear on the Summary of Analytical Results:

- A The amount detected is less than the quantitation limit, and is an estimated value.
- B The results for these compounds are semi-quantitative.

The following target analytes were detected in the following method blanks:

Method Blank ID	Instrument	Date Analyzed	Analyte	Result μg/L
MWG1103	HP5973G	11/03/99	Bromomethane	0.6 Ј

These results are within QC limits.Bromomethane was not detected in any of the samples associated with this method blank.

No target analytes were detected in the storage blanks associated with these samples.

All surrogate recoveries were within QC limits with the following exceptions:

Sample ID	Laboratory Sample ID	Surrogate	Percent Recovery	QC Limit Percent Recovery
WNC9903	AB25203	1,2-dichloroethane-d4	141	76 - 114

All MS/MSD results were within QC limits with the following exceptions:

Sample ID	Laboratory Sample ID	Analyte	MS %Rec	MSD % Rec	QC Limit
WNC9905	AB25261	1,2-dibromo-3-chloropropane	69	71	75 - 130

All internal standard areas and retention times were within QC limits.

The following LCS analytes failed to meet criteria (60 to 140 % recovery):

LCS File ID	Date	Analyte	% Rec	QC Limit
LWC1103	11/03/99	Dichlorodifluoromethane	46	60 - 140
LWH1106A	11/06/99	Dichlorodifluoromethane	48	60 - 140
LWJ1109	11/09/99	Dichlorodifluoromethane	47	3.0 - 7.0

Accurate spiking of dichlorodifluoromethane is difficult because it is a gas at room temperature.

All samples were analyzed within the holding time.

RESULTS SUMMARY

The results can be found on the Summary of Results report.

Any questions in reference to this data package may be addressed to Joseph Naughten at (510) 412-2358.

Glossary of Terms

Method Blanks

A laboratory method blank is laboratory reagent water or sand with all reagents, surrogates, and internal standards added and carried through the same sample preparation and analytical procedures as the field samples. The laboratory method blank is used to determine the level of contamination introduced by the laboratory during analysis.

Storage Blanks

A storage blank is laboratory reagent water that is stored in the laboratory refrigerator for one week. All reagents, surrogates, and internal standards are added at the time of analysis and it is processed through the same sample preparation and analytical procedures as the other blanks. The storage blank is used to determine the level of contamination introduced by the laboratory during sample storage.

Surrogates

Surrogates are organic compounds which are similar to the target analytes in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples. All samples are spiked with surrogate compounds prior to analysis. Surrogate percent recovery (%R) provides information about both the laboratory performance on individual samples and the possible effects of the sample matrix on the analytical results.

Matrix Spike and Spike Duplicate Analysis

Matrix spike sample and spike duplicate analyses provide information about the effect of the sample matrix on sample preparation and measurement. Poor percent recovery (%R) results and large relative percent difference (RPD) between duplicates may indicate inconsistent laboratory technique, sample nonhomogeneity in soils, or matrix effects which may interfere with analysis.

Internal Standards

Internal standards are organic compounds which are similar to the target analytes in chemical composition and behavior in the analytical process, but not normally found in environmental samples. All samples are spiked with internal standard compounds prior to analysis. Internal standard recoveries and retention times provide information about both the instrument performance on individual samples and the possible effects of the sample matrix on the analytical results.

Laboratory Control Samples

Laboratory control samples (LCSs) are analyzed daily to demonstrate comparability of the continuing calibration standard. It is equivalent to the continuing calibration standard, but it is obtained from an independent source.

Case Number: R00S05

Analysis:

GC/MS Volatiles

Site: Whittier Narrows

SDG: 99300A

Matrix:

Water

	99300A																	
Date:	12/03/99 E	<u>;</u> _ 7	2			B			5 -	-3			B		,	2 -	ء ج	,
Sample No.		1							3				4		1	5		
Sample ID	w	NC99	001		WNC	9902		l v	VNC9	903		W	VNC990	4	l v	VNC9	905	
Lab Sample ID		B251			AB25				AB252				B2520		1	AB252		
Date of Collection		0/26/9		-	10/20			1	10/27/				10/27/99]	10/28/	/99	
Units	ug/L	0,20,		ug/l				ug/L				ug/L			ug/L			
Analyte	Result		Q Cn	_		Q	Cmt	Result		Q	Cmt	Result	•	Cmt	_		o	Cmt
Dichlorodifluoromethane	1	U	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ 	1	U			1	U	<u> </u>	Cint	1	υl		1	U	$\overline{}$	
Chloromethane	1	U		1	<u>U</u>		-	1	U			1	U		1	U	-	
Vinyl Chloride	0.5	U		0.5		1	 	0.5	U			0.5	U	+	0.5	U	-	
Bromomethane	1	U		1	U			1	U			1	U		1	U		
Chloroethane	— <u> </u>	U		1	U	-		1	U			1	บ		1	บ		
Trichlorofluoromethane	1	U	-	1	U	-		1	ט			1	U	-	1 1	U	\dashv	
	1	U		1	U		-	1	וט			1	U		1	u		
1,1-Dichloroethene					U	_	-		U							ט		
Carbon Disulfide	1	U		1		-	ļ	1				1	U		1	_	\dashv	
Acetone	10	U		10	U	-		10	U			10	U		10	U	\longrightarrow	
Methylene Chloride	1	U		1	U	-	-	1	U			1	U	-	1	U		
trans-1,2-Dichloroethene	1	U		1	U		ļ	1	U			1	U		1	U		
Methyl-t-Butyl Ether	1	U		1	U	-	<u> </u>	1	U			1	U		1	U		
1,1-Dichloroethane	1	U	ļ	1	U	-	<u> </u>	1	U			1	U		1	บ		
cis-1,2-Dichloroethene	1	U		1	U		ļ	1	U			1	U		(0.5)		J	A
2-Butanone	10	U		10	U		<u> </u>	10	U			10	U		10	U		
Chloroform	1	U		1	U			1	U			I	บ		1	U		
1,2-Dichloroethane	0.5	U		0.5				0.5	U			0.5	U		0.5	U		<u> </u>
1,1,1-Trichloroethane	1	U		1	U			1	U			1	U		1	U		
Carbon Tetrachloride	0.5	U		0.5	U			0.5	. U			0.5	U		0.5	บ		
Benzene	1	U		1	U			1	บ			1	U		1	U		
Trichloroethene	1	บ		1	U			0.9		J	A	1	U		4			
1,2-Dichloropropane	1	U		1	U			1	U			1	U		1	U		
Bromodichloromethane	1	U		1	U			1	U			1	U		1	U		
cis-1,3-Dichloropropene	0.5	U		0.5	U			0.5	U			0.5	U		0.5	U		
trans-1,3-Dichloropropene	0.5	U		0.5	U			0.5	บ			0.5	U		0.5	U		Ī
1,1,2-Trichloroethane	1	U		1	U			1	U			1	U		1	U		
Dibromochloromethane	1	U		1	U			1	U			1	U		1	บ		
4-Methyl-2-pentanone	10	U		10	U			10	U			10	U		10	U		
Toluene	1	U		1	U			1	U			1	U		1	U		
1,3-Dichloropropane	1	U		1	U			1	U			1	U		1	U		
2-Hexanone	10	U		10	U			10	U			10	U		10	U		
Tetrachloroethene	110			1	U			500				1	U		150			
1,2-Dibromoethane	1	U		1	U			1	U			1	U		1	U		
Chlorobenzene	1	U		1	U	_	1	1	U			1	U		1	U	\neg	
Ethyl Benzene	1	U		1	U	-1		1	U			1	U		1	Ū		· · · · · · · · · · · · · · · · · · ·
Xylene (para & meta-)	1	U		1	U			1	υ			1	U		1	Ū		·
Xylene (ortho-)	1	U		1	<u>U</u>		1	I	U			1	Ū		1	U		
Styrene	1	U		1	U		1	1	U		· · · · · ·	1	U		1	U		
Bromoform	1	U		1	<u>U</u>		1	1	U			1	U		1	U		
1,1,2,2-Tetrachloroethane	1	U		1	U		†	1	U			1	U		1	U		
1,2,3-Trichloropropane	1	บ		1	<u>_</u>		 	1	Ü			1	-ט		1	U	—	<u> </u>
1,3-Dichlorobenzene	1	U		1	U		\vdash	1	U			1	U		1	U		
1,4-Dichlorobenzene	1	บ		1	<u>U</u>		 	1	บ			1	U		1	U	-	
1,2-Dichlorobenzene	1	U		1	<u>U</u>		+	1	U		-	1	U	+	1	U		
1,2-Dibromo-3-chloropropane	2	U		2	U			2	บ		 	2	U		2	บ		<u> </u>
T-t-chard-of	2			2			-		- 11			2	77	+	+			

Tetrahydrofuran Q-Laboratory Data Qualifiers

U

U J-The amount detected is an estimated value.

U-This compound was analyzed for, but not detected. Cmt-See Report Narrative for Comment

Cmt-See Report Narrative for Comment

Case Number: R00S05

Site: Whittier Narrows

SDG: 99300A Date: 12/03/99 Analysis:

GC/MS Volatiles

Matrix:

Water

Date:	12/03/99 (77	5			1-	3			15		c	f -	9-	- 9	L) — (8-1	10
Sample No.	<u>-</u>	6				7				8		· · · · · · · ·	9				10	<u> </u>	$\overline{}$
Sample ID	w	NC9	906		v	VNC9	907		v	NC990	8	ı	/NC				NC9	910	
Lab Sample ID		B252				AB252				B25264		!	B25				B252		İ
Date of Collection	_	0/28/				10/28/				0/28/99			10/29				0/29/		ļ
Units	ug/L	0, 20 ,			ug/L				ug/L	. 4. = 0		ug/L				ug/L	0,221		l
Analyte	Result		Q	Cmt	Result		0	Cmt	Result	Q	Cmt	Result		Q	Cmt	Result		Q	Cmt
Dichlorodifluoromethane	1	U		Cint	1	Ū	٧_	T T	1	<u>"</u>	T	1	U	_	C	1	U	~ 1	
Chloromethane	1	U			1	U			1	U	+	1	U			1	บ		
Vinyl Chloride	0.5	U			0.5	U			0.5	U	+	0.5	U			0.5	U		
Bromomethane	1	U			1	U			1	U		1	U			1	U		
Chloroethane	1	U	-		1	U		<u> </u>	1	U	+	1	U			1	U		1
Trichlorofluoromethane	1	U			1	U			1	ש		1	U			<u>1</u>	U	-	
1.1-Dichloroethene	(0.3		J	_	1	U			1	U		1	U			1	U		$\overline{}$
		U	J	A	1	บ			1	U	+	1	U			1	ט		
Carbon Disulfide	1					ซ		 			+		U			10	ט	-	
Acetone	10	U			10			<u> </u>	10	U		10		<u> </u>					
Methylene Chloride	1	U		 	1	U			1	U		1	U			1	U		
trans-1,2-Dichloroethene	1	U	<u> </u>		1	U			1	U		(00)	U	-		(0.0')	U	Ţ	
Methyl-t-Butyl Ether	1	U			1	U			1	U		(0.9)		J	A	(0.8)		J	_A_
1,1-Dichloroethane	1	U			1	Ū			1	U		1	U		<u> </u>	1	U		
cis-1,2-Dichloroethene	(0.5)		J	A	(0.5)	-4	J	A	1	Ü		1	U	<u> </u>		1	U		
2-Butanone	Э	U			10	U			10	U		10	U			10	บ		
Chloroform	1	U			1	U			1	U		1	U			1	U		
1,2-Dichloroethane	0.5	U			0.5	U			0.5	.U		0.5	.U			0.5	U		
1,1,1-Trichloroethane	1	Ŭ			1	U		ļ	1	U		1	U	ļ	<u> </u>	1	U		
Carbon Tetrachloride	0.5	U			0.5	บ			0.5	U		0.5	U			0.5	U		
Benzene	1	U			1	U			1	U		1	Ų			1	U		
Trichloroethene	7		ļ		6				1	U		2				2			
1,2-Dichloropropane	1	U			1	U			1	บ		1	U			1	U		
Bromodichloromethane	1	U			1	U			1	U		1	U			1	U		
cis-1,3-Dichloropropene	0.5	U			0.5	U			0.5	U		0.5	U			0.5	U		
trans-1,3-Dichloropropene	0.5	U			0.5	U			0.5	U		0.5	U			0.5	U		
1,1,2-Trichloroethane	1	U			1	U			1	U		1	U			1	บ		
Dibromochloromethane	1	U			1	Ŭ			1	U		1	U			1	U		
4-Methyl-2-pentanone	10	U			10	U			10	U		10	U	ļ		10	U		
Toluene	1	U			1	U			1	U		1	U			1	บ		
1,3-Dichloropropane	1	U			1	U			1	U		1	U			1	U		$\overline{}$
2-Hexanone	10	U			10	U			10	U		10	U	·		10	U		
Tetrachloroethene	18				18				1	U		31				43			
1,2-Dibromoethane	1	U			1	U		<u> </u>	1	U	1	1	บ			1	U		
Chlorobenzene	1	U			1	U			1	U		1	U			1	U		\Box
Ethyl Benzene	1	U			1	U			1	U		1	U			1	U		
Xylene (para & meta-)	1	U			1	U			1	U		1	U			1	U		
Xylene (ortho-)	1	U		· · · · · ·	1	U	_		1	U	_	1	U			1	Ū		
Styrene	1	U			1	U		 	1	U	1	1	U			1	U		
Bromoform	1	U	—		1	U			1	U	+-	1	U			1	U	-	
1,1,2,2-Tetrachloroethane	1	U		 	1	U		 	1	U	+	1	U	4	 	1	U		\Box
1,2,3-Trichloropropane	1	U		 	1	U		†	1	U		1	U		\vdash	1	บ		
1,3-Dichlorobenzene	1	Ū		†	1	U		 	1 1	U		1	U		 	1	Ü		\vdash
1,4-Dichlorobenzene	1	U		 	1	U	_	†	1	ש	+	1	U		 	1	U		$\vdash \vdash$
1,2-Dichlorobenzene	1	U	\vdash	 	1	U		†	1	U	1	1	บ	_		1	Ü		
1,2-Dibromo-3-chloropropane	2	U	-	1	2	บ			2	U	_	2	. บ		 	2	Ü		$\vdash \vdash$
Tetrahydrofuran	2	U	_	 	2	U		1	2	ט	 	2	·U		 -	2	Ü		\vdash
. on any diordiani			i						<u></u>			<u> </u>			1				

Q-Laboratory Data Qualifiers

Cmt-See Report Narrative for Comment

J-The amount detected is an estimated value.

U-This compound was analyzed for, but not detected. Cmt-See Report Narrative for Comment

Case Number: R00S05

Analysis:

GC/MS Volatiles

Site: Whittier Narrows SDG: 99300A

Matrix:

Water

Date: 12/03/99

Date.	12/03/99	B				4	70	L	Y	7	2		-	7-7		マ-	-3		
Sample No.		11				12	-			13				14	1		15		
Sample ID	w	NC99	11		w	NC99	912	,	u.	/NC9			v	VNC991	ı	l v	/NC9	915	
Lab Sample ID		B2526				B252				B25				AB25362			B25		-
Date of Collection		0/29/9			l	0/29/	-			0/29				11/1/99			11/1/		İ
Units	ug/L	012010	•		ug/L	01271	,,		ug/L		,,,		ug/L	11/1///		ug/L	1 21 21		
1	Result		^	Comt	Result		0	Cmt	Result		0	Cmt	Result	Q	Cmt	Result		0	Cmt
Analyte Dichlorodifluoromethane	1	U	Q T	Cmt	1	U	Q	Cin	1	U		Citt	1	<u>ע</u>	Cint	1	U	<u> </u>	Cint
						U			1				1	<u>ט</u>		1	U	\dashv	
Chloromethane	1	U			1	_				U								\dashv	
Vinyl Chloride	0.5	U	-		0.5	U			0.5	U			0.5	U		0.5	U	-	
Bromomethane	1	U	\dashv		1				1				1	U	-	1			
Chloroethane	1	U			1	U			1	U			1			1	U		
Trichlorofluoromethane	1	U			1	U			1	U			1	U	 	1	U		
1,1-Dichloroethene	1	U	-		(0.7)		J	A	(0.7)		J	A	1	U	_	1	U		
Carbon Disulfide	1	U	_		1	U			1	U			11	U		1	U		
Acetone	10	U			10	U			10	U			10	U		10	U		
Methylene Chloride	1	U	_		1	U			1	U			1	U		1	U		
trans-1,2-Dichloroethene	1	U			1	U			1	U			1	U		1	Ü		
Methyl-t-Butyl Ether	1	U			1	U			1	บ			1	U		1	U	لـــــ	
1,1-Dichloroethane	1	บ			0				(2)				1	U		(0.5)		J	<u>A</u>
cis-1,2-Dichloroethene	1	U			0.5		J	A	0.5		J	A	1	U		1	U		
2-Butanone	10	U			10	U			10	U			10	U		10	U		
Chloroform	1	U			1	U			1	U			1	บ		1	U		
1,2-Dichloroethane	0.5	U			0.5	U			0.5	U			0.5	U		0.5	U		
1,1,1-Trichloroethane	1	U			1	U			1	U			1	U		1	U		
Carbon Tetrachloride	0.5	U			0.5	Ŭ			0.5	U			0.5	U		0.5	U		
Benzene	1	U			1	U			1	U			1	U	"	I	Ü		
Trichloroethene	1	U			8				6				2			1			
1,2-Dichloropropane	1	U			1	U			1	U			1	U		1	U		
Bromodichloromethane	1	U			1	U			1	U			1	U		1	U		
cis-1,3-Dichloropropene	0.5	บ			0.5	U			0.5	U			0.5	U		0.5	U		
trans-1,3-Dichloropropene	0.5	U			0.5	U			0.5	U			0.5	U		0.5	U		
1,1,2-Trichloroethane	1	U			1	U			1	U			1	U		1	U		
Dibromochloromethane	1	U			1	U			1	U		T	1	U		1	U		
4-Methyl-2-pentanone	10	บ			10	U			10	U			10	U		10	U	$\overline{}$	
Toluene	1	U			1	บ			1	U			1	U		1	U	 	
1,3-Dichloropropane	I	U			1	U		· · · · ·	1	U			I	U	1	1	U		
2-Hexanone	10	บ			10	U			10	U			10	U		10	Ū		r
Tetrachloroethene	1	U			310		_		280				39			29			
1,2-Dibromoethane	1	U			1	υ			1	U			1	ט		1	U		
Chlorobenzene	1	U			1	U	_		1	U			1	U		1	U		
Ethyl Benzene	ı	U	\neg		1	U			1	U			1	U		1	<u>.</u>		
Xylene (para & meta-)	1	U			1	U	_		1	U			1	U		1	บ		·
Xylene (ortho-)	1	U			1	U			1	U			1	U		1	U		Γ—
Styrene	1	บ	\dashv		1	U		 	1	U	\vdash	 	1	U	1	1	U	_	
Bromoform	1	U	-		1	U		-	1	U	_		1	U U	+	1	U		
1,1,2,2-Tetrachloroethane	1	U			1	U			1	U		 	1	U	-	1	U		
1,2,3-Trichloropropane	1	U			1	U		-	1	U	 	 	1	U	 	1	U		
1,3-Dichlorobenzene	1	U	-+		1	U		 	1	U	 		1	U	+	1	U		
1,4-Dichlorobenzene	1	U	\dashv		1	U			1	Ŭ	-	 -	1	บ		1	U	 	
1,2-Dichlorobenzene	1	U			1	U		<u> </u>	1	U	_	 	1	U	-	1	U		
1,2-Dibromo-3-chloropropane	2	U	+		2	U		ļ	2	U		 	2	Ū		2	ַ		
	2	U	\dashv		2	U			2	U		-	2	บ		2	U		
Tetrahydrofuran	1	U		· m	<u> </u>	U		L		U	<u> </u>	L		υl		<u> </u>	U		L

Q-Laboratory Data Qualifiers

Cmt-See Report Narrative for Comment

J-The amount detected is an estimated value.

U-This compound was analyzed for, but not detected. Cmt-See Report Narrative for Comment

Case Number: R00S05

Site: Whittier Narrows

Analysis:

GC/MS Volatiles

Matrix: Water

SDG: 99300A

Date: 12/03/99

Date:	12/03/99	3 -	u			n	.2*		1	<u></u>	,	· ~7			rs.	
						15		· · · · ·	18	<u> </u>		<u>د ہ</u>			<u> </u>	
Sample No.		16				17	_	[.,		0		19 /NC9919		**	20 /NC9920	[
Sample ID		NC99				VNC991			VNC991		1					
Lab Sample ID		B253				AB2536	•		AB25378	5	ŀ	B25379			AB25380	
Date of Collection		1/1/9	19			11/1/99			11/2/99		1	11/2/99			11/2/99	
Units	ug/L		_	_	ug/L	_		ug/L	_		ug/L			ug/L	_	
Analyte	Result	1	Q	Cmt	Result	- (Cmt	Result	Q	Cmt	Result	Q	Cmt	Result	Q	Cmt
Dichlorodifluoromethane	1	Ŭ			1	U		1	U		1	U	.	11	U	↓ ——↓
Chloromethane	1	U			1	U		1	U		1	U	-	1	U	1
Vinyl Chloride	0.5	U			0.5	U		0.5	U		0.5	U		0.5	U	1
Bromomethane	1	U			1	U		1	U		1	U	ļ	1	U	<u> </u>
Chloroethane	1	U			1	U		1	U		1	U		1	U	\vdash
Trichlorofluoromethane	1	U			1	U		1	U		1	U		1	U	
1,1-Dichloroethene	1	U			1	U		1	U		1	ַ ט		1	U	
Carbon Disulfide	1	U			1	U		1	U		1	U		1	U	
Acetone	10	บ			10	U		10	U		10	U		10	U	
Methylene Chloride	1	U			1	U		11	U		1	U		1	U	
trans-1,2-Dichloroethene	1	U			1	U		1	U		1	U		1	U	
Methyl-t-Butyl Ether	11	U			1	U		1	U		1	ับ		1	U	
1,1-Dichloroethane	(2)				1	U		1	U		1	U		1	U	
cis-1,2-Dichloroethene	8				1	U		1	U		1	U		1	บ	
2-Butanone	10	U			10	U		10	U		10	U		10	U	
Chloroform	1	U			1	U		1	U		1	U		1	U	
1,2-Dichloroethane	0.5	U			0.5	U		0.5	U		0.5	U		0.5	U	
1,1,1-Trichloroethane	1	U			I	U		1	U		1	U		1	U	
Carbon Tetrachloride	0.5	U			0.5	U		0.5	U		0.5	U		0.5	U	
Benzene	1	U			1	U		1	U		1	U		1	U	
Trichloroethene	5				1	U		1			2			1	U	
1,2-Dichloropropane	1	U			1	U		1	U		1	U		1	U	
Bromodichloromethane	1	U			1	U		1	U		1	U		1	U	
cis-1,3-Dichloropropene	0.5	υ			0.5	U	—	0.5	U	7	0.5	ט		0.5	U	
trans-1,3-Dichloropropene	0.5	U			0.5	U	-	0.5	U	T	0.5	U		0.5	U	
1,1,2-Trichloroethane	1	U			1 .	U		1	U	1	1	U		1	U	
Dibromochloromethane	1	U			1	U		1	U		1	U		1	U	_
4-Methyl-2-pentanone	10	U			10	U		10	U	1	10	U	1	10	U	1
Toluene	1	U			1	U	_	1	U	+	1	U	 	1	ט	+
1,3-Dichloropropane	1	U			1	U		1	U		1	U	<u> </u>	1	บ	-
2-Hexanone	10	U			10	Ū	-	10	U		10	U	1	10	U	
Tetrachloroethene	240				1	U	_	40			130	<u> </u>	+	1	U	1
1.2-Dibromoethane	1	U			1	U	 	1	Ū	1-	1	U	+	1	บ	+
Chlorobenzene	1	U				U		1	U	_	1 1	U		1	U	+
Ethyl Benzene	1	U			1	บ	_	1	U		1	U	+	1	U	+
Xylene (para & meta-)	1	U			1	U	-	1	U	+	1	U	+	1	<u>ט</u>	+
Xylene (ortho-)	1	U			1	U		1	Ū	-	1	Ū		1	U	+
Styrene	1	U			1	บ	+	1	Ū		1	U	-	1	U	+
Bromoform	1	U		 	1	U		1	บ	+	1	U	+	1	บ	+
1,1,2,2-Tetrachloroethane	1	U		 	1	บ	-	1	U	+	1	- ט		1	U	+
	1	U		 	1	U		1	Ū	+	1	U		1	U	+
1,2,3-Trichloropropane	1	U		 		U	+		U			U			- ט	
1,3-Dichlorobenzene		ับ			1	U		1	U		1			1		
	1			 	1	U		1			1	U	ļ	1	U	-
1,2-Dichlorobenzene	1	U		⊢–	1			1	U	-	1			1	U	+
1,2-Dibromo-3-chloropropane	2	U		<u> </u>	2	U		2	U		2	U		2	U	+
Tetrahydrofuran	2	U		L	amount d	U		2	U	l	2	U		2	U	1

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Case Number: R00S05

Analysis:

GC/MS Volatiles

Site: Whittier Narrows

Matrix:

Water

SDG: 99300A Date: 12/03/99

Sample No. Sample ID		hod I WG1		S			Blan 104A				Blani 106A				Blan 1109	k		hod :		- 1
Lab Sample ID	l	N/A				N/A	1			N/A	\			N/A	4			N/A		
Date of Collection		N/A				N/A	A			N/A	1			N/A	4			N/A		
Units	ug/L				ug/L				ug/L				ug/L				ug/L			
Analyte	Result		Q	Cmt	Result		0	Cmt	Result		o	Cmt	Result		Q	Cmt	Result		Q	Cmt
Dichlorodifluoromethane	1	U	_		1	U			1	U			1	U			1	υ	_	
Chloromethane	1	U			1	U			1	U				U			1	U		
Vinyl Chloride	0.5	U			0.5	U			0.5	U			0.5	U			0.5	U		
Bromomethane	0.6		J	A	1	U			1	U			1	U			1	U		
Chloroethane	1	U			1	U			1	ŭ			1	U			1	U		
Trichlorofluoromethane	1	U			1	U			1	U			1	U			Ī	U		
1,1-Dichloroethene	1	U			1	U			1	U			1	U			1	U		
Carbon Disulfide	1	U			1	U			1	U			1	U			1	U		
Acetone	10	U			10	U			10	U			10	U			10	บ		
Methylene Chloride	1	U			1	U			1	U			1	U			1	บ		
trans-1,2-Dichloroethene	1	U			1	U			1	U			1	U			1	U		\Box
Methyl-t-Butyl Ether	1	U			1	Ū			1	Ū			1	U			1	U		
1,1-Dichloroethane	1	U			1	U			1	U			1	U			1	U		\Box
cis-1,2-Dichloroethene	1	U			1	U			1	Ū			1	U			1	บ		
2-Butanone	10	U			10	U			10	U			10	Ū			10	บ	_	
Chloroform	1	U			1	U			1	U			1	U			1	U		
1,2-Dichloroethane	0.5	U			0.5	U			0.5	U			0.5	U			0.5	U	_	
1.1.1-Trichloroethane	1	U			1	U			1	Ū			1	U			1	U		\Box
Carbon Tetrachloride	0.5	U			0.5	U			0.5	U			0.5	Ū			0.5	Ū		\Box
Benzene	1	U			1	U			1	U			1	U			1	U		
Trichloroethene	1	U			1	Ŭ			1	U			· 1	U			1	U		
1,2-Dichloropropane	1	U		 	1	U			1	U		l	1	U			1	U		
Bromodichloromethane	1	U			1	U			1	U			1	U			1	U		
cis-1,3-Dichloropropene	0.5	U			0.5	U			0.5	U			0.5	U			0.5	Ū		
trans-1,3-Dichloropropene	0.5	Ū			0.5	U			0.5	U			0.5	Ū			0.5	U		
1,1,2-Trichloroethane	1	Ū			1	U			1	U			1	Ū			1	U		
Dibromochloromethane	1	U			1	Ŭ			1	U			1	U			1	U		
4-Methyl-2-pentanone	10	U		-	10	U			10	U			10	U			10	U	_	
Toluene	1	U			1	U			1	U			ī	U			1	Ū		
1,3-Dichloropropane	1	U			1	U			1	U			1	U			1	บ		
2-Hexanone	10	U			10	U			10	U			10	U			10	U		
Tetrachloroethene	1	U			1	U			1	U			1	Ŭ			1	U		
1,2-Dibromoethane	1	U			1	U	-		1	U			1	U			1	U		
Chlorobenzene	1	U			1	U			1	U			1	U			1	U		
Ethyl Benzene	1	U			1	U			1	U	_		1	U			1	Ū		
Xylene (para & meta-)	1	U		-	1	U			1	U			1	U			1	Ū		
Xylene (ortho-)	1	U		-	1	Ū			1	U			1	U			1	Ū		
Styrene	1	U			1	U			1	U			1	Ū			1	U		
Bromoform	1	U			1	U			1	U			1	U			1	U		
1,1,2,2-Tetrachloroethane	1	U			1	U			1	U			1	U			1	U		
1,2,3-Trichloropropane	1	บ			1	U			1	U			1	U			1	U		
1,3-Dichlorobenzene	1	<u>U</u>			1	Ū		 	1	U			1	Ū			1	บ		$\vdash \vdash \vdash$
1,4-Dichlorobenzene	1	U			1	Ū			1	Ū			1	U			1	U		$\vdash \vdash$
1,2-Dichlorobenzene	1	יט			1	U	_		1	U			1	U			1	U		$\vdash \vdash$
1,2-Dibromo-3-chloropropane	2	U			2	U			2	Ū			2	Ū	-		2	U		\square
Tetrahydrofuran	2	U		 	2	U			2	U			2	Ū	 		2	U		$\vdash \vdash \vdash$
O Laboratory Data Qualifiers	 -			L	amount de			L .	·		L	٠	<u>"</u>		<u> </u>					<u></u>

Cmt-See Report Narrative for Comment

J-The amount detected is an estimated value.

Q-Laboratory Data Qualifiers J-The amount detected is an estimated va U-This compound was analyzed for, but not detected. Cmt-See Report Narrative for Comment

Case Number: R00S05

Analysis:

GC/MS Volatiles

Site: Whittier Narrows

Matrix:

Water

SDG: 99300A Date: 12/03/99

Date of Collection	Sample No. Sample ID		hod E		:		hod WJ1	110	k	VH	BLK	Blan (1025		VH	age l	1103		VB	age I	1112	
Units	Lab Sample ID		N/A				N/A				SB11	01		S	B111	299		S			
Analyte	Date of Collection		N/A				N/A	.			N/A	1			N/A	L			N/A		
Dichlorodifluoromethane	Units	ug/L				ug/L				ug/L				ug/L				ug/L			
Chloromethane	Analyte	Result		Q	Cmt	Result		Q	Cmt	Result		Q	Cmt	Result	_	Q	Cmt	Result		Q	Cmt
Viny Clioride	Dichlorodifluoromethane	1	U			1	U			1	U				U			1	บ		
Decommendation	Chloromethane	1	U			1	U			1	U			1	U			1	U		
Chloroschane	Vinyl Chloride	0.5	U			0.5	U			0.5	U			0.5	บ			0.5	U		
Trichloro-flancomethane	Bromomethane	1	U			1	U			1	U			1	U			1	U		
1.1-Dichloroethene	Chloroethane	1	U			1	υ			1	U			1	ับ			1	U		
Carbon Disulfide	Trichlorofluoromethane	1	U			1	U			1	U			1	U			1	U		
Acetone	1,1-Dichloroethene	1	U			1	U			1	U			1	U			1	U		
Methylene Chloride	Carbon Disulfide	1	U			1	U			1	U			1	U			1	U		
Hans-1,2-Dichloroethene		10	U			10	U			10	U			10	U			10	U		
Hans-1,2-Dichloroethene	Methylene Chloride	1	U			1	U			1	U			1	U			1	U		
1.1-Dichloroethane		1	U			1	U			1	U			1	U			1	U		
cis-1,2-Dichloroethene 1 U 1	Methyl-t-Butyl Ether	1	U			1	U			1	U			1	U			1	U		
2-Butanone	1,1-Dichloroethane	1	U			1	U			1	U			1	U			1	U		
Chloroform	cis-1,2-Dichloroethene	1	U			1	U			1	U			1	U			1	U		
1,2-Dichloroethane	2-Butanone	10	U			10	U			10	U			10	U			10	U		
1,1,1-Trichloroethane	Chloroform	1	U			1	Ŭ			1	U			1	U			1	U		
Carbon Tetrachloride	1,2-Dichloroethane	0.5	U			0.5	U			0.5	U			0.5	U			0.5	U		
Benzene	1,1,1-Trichloroethane	. 1	U			1	U			1	Ū			1	U			1	U		
Trichloroethene	Carbon Tetrachloride	0.5	U			0.5	U			0.5	U			0.5	U			0.5	U		
1.2-Dichloropropane	Benzene	1	U			1	U			1	U			1	U			1	U		
Bromodichloromethane	Trichloroethene	1	U	•		1	U			1	U			1	U			1	U		
cis-1,3-Dichloropropene 0.5 U	1,2-Dichloropropane	1	U			1	U			1	U			I	U			1	U		
trans-1,3-Dichloropropene 0.5 U 0.5 U 0.5 U 0.5 U 0.5 U 1,1,2-Trichloroethane 1 U	Bromodichloromethane	1	U			1	U			1	U			1	U			1	U		
1,1,2-Trichloroethane	cis-1,3-Dichloropropene	0.5	U			0.5	U			0.5	U			0.5	U			0.5	U		
1,1,2-Trichloroethane	trans-1,3-Dichloropropene	0.5	U			0.5	U			0.5	U			0.5	. U			0.5	U		
4-Methyl-2-pentanone 10		1	U			1	U			1	U			1	U			1	U		
Toluene	Dibromochloromethane	1	U			1	U			1	U			1	U			1	U		
1,3-Dichloropropane	4-Methyl-2-pentanone	10	U			10	U			10	U			10	U			10	U		
2-Hexanone 10	Toluene	1	U			1	U			1	U			1	U			1	U		
Tetrachloroethene	1,3-Dichloropropane	1	U			1	U			1	U			1	U			1	U		
1,2-Dibromoethane	2-Hexanone	10	U			10	U			10	U			10	U			10	U		
Chlorobenzene 1 U 1 U I <	Tetrachloroethene	1	U			1	U			1	U			1	U			1	U		
Ethyl Benzene 1 U 1 <	1,2-Dibromoethane	1	U			1	U			1	U			1	U			1	บ		
Xylene (para & meta-) 1 U I U 1	Chlorobenzene	1	U			1	Ū			1	U			1	U			1	U		
Xylene (ortho-) 1 U 1	Ethyl Benzene	1	U			1	U			1	Ū			1	U			1	U		
Xylene (ortho-) 1 U 1	Xylene (para & meta-)	1	U			1	U			1	U			1	U		<u> </u>	1	บ		
Styrene 1 U </td <td><u> </u></td> <td>1</td> <td>U</td> <td></td> <td></td> <td>1</td> <td>U</td> <td></td> <td>·</td> <td>1</td> <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td>1</td> <td>U</td> <td></td> <td></td>	<u> </u>	1	U			1	U		·	1				1				1	U		
Bromoform 1 U	<u> </u>	1	U			1	U			1	U			1				1	U		$\overline{}$
1,1,2,2-Tetrachloroethane 1 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2<							$\overline{}$	_					†								
1,2,3-Trichloropropane 1 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2																			$\overline{}$		
1,3-Dichlorobenzene 1 U 2 U 2	The second secon																† — —				<u> </u>
1,4-Dichlorobenzene 1 U 2 U 2			_		1				—										_		
1,2-Dichlorobenzene 1 U 2 U 2	\				 	-							 								
1,2-Dibromo-3-chloropropane 2 U 2 U 2 U 2 U 2 U 2 U									1				 	-			 				
									1	-				ļ	_		-				
Tetrahydrofuran	Tetrahydrofuran	2	U		\vdash	2	U		1	2	U			2	U			2	U		

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Case Number: R00S05

Site: Whittier Narrows

SDG: 99300A Date: 12/03/99 Analysis:

GC/MS Volatiles

Matrix: Water

Sample No.	Quan	titation	
Sample ID	L	imit	
Lab Sample ID	N	I/A	
Date of Collection	N	VA.	
Units	ug/L		
Analyte	Result	Q	Cmt
Dichlorodifluoromethane	1		
Chloromethane	1		
Vinyl Chloride	0.5		
Bromomethane	1		
Chloroethane	1		
Trichlorofluoromethane	1		
1,1-Dichloroethene	1		
Carbon Disulfide	1		
Acetone	10		
Methylene Chloride	I		
trans-1,2-Dichloroethene	1		
Methyl-t-Butyl Ether	1		
1,1-Dichloroethane	I		
cis-1,2-Dichloroethene	1		
2-Butanone	10		
Chloroform	1		
1,2-Dichlorocthane	0.5		
1,1,1-Trichloroethane	1		
Carbon Tetrachloride	0.5		
Benzene	1		
Trichloroethene	1		
1,2-Dichloropropane	1		
Bromodichloromethane	1		
cis-1,3-Dichloropropene	0.5		
trans-1,3-Dichloropropene	0.5		
1,1,2-Trichloroethane	1		
Dibromochloromethane	1		
4-Methyl-2-pentanone	10		
Toluene	1		
1,3-Dichloropropane	1		
2-Hexanone	10		
Tetrachloroethene	1		
1,2-Dibromoethane	1		
Chlorobenzene	1		
Ethyl Benzene	1		
Xylene (para & meta-)	1		
Xylene (ortho-)	1		
C+	,		

1,2-Dibromo-3-chloropropane
Tetrahydrofuran
Q-Laboratory Data Qualifiers

1,1,2,2-Tetrachloroethane
1,2,3-Trichloropropane
1,3-Dichlorobenzene
1,4-Dichlorobenzene

1,2-Dichlorobenzene

Styrene Bromoform

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U-This compound was analyzed for, but not detected. Cmt-See Report Narrative for Comment

Cmt-See Report Narrative for Comment

MASTER FILE: voa_h2oc.wk4, version 1.0, 11/16/99, Lotus 123 97

1

2

Filename: 99300av.WK4

Case Number: R00S05

Site: Whittier Narrows

SDG: 99300A Date: 12/03/99 Analysis:

GC/MS Volatiles

Matrix:

Water

Sample No.		1				2				3				4	-			5		
Sample ID	W	VNC9	901		W	NC9	902		W	NC9	903		W	NC!	9904		W	NC9	905	
Lab Sample ID	A	B251	95		A	B25	196		A	B25	203		A	B25	204		A	B252	261	
Date of Collection	,	10/26/	99		1	0/26	/99		1	0/27	/99		1	0/27	/99		1	0/28	/99	
Units	ug/L				ug/L				ug/L				ug/L				ug/L			
Analyte	Result		Q	Cmt	Result		Q	Cmt	Result		Q	Cmt	Result		Q	Cmt	Result		Q	Cmt
Dichlorofluoromethane	5	G	J	В	3	U	J	В	5	U	J	В	5	U	J	В	5	U	J	В
1,1,2-Trichlorotrifluoroethane	5	U	J	В	5	U	J	В	5	Ų	J	В	5	U	J	В	5	U	J	В
Acrylonitrile	50	U	J	В	50 _	U	J	В	50	U	J	В	50	U	J	В	50	U	J	В
1-Bromo-2-chloroethane	5	U	J	В	5	U	J	В	5	U	J	В	5	U	J	В	5	U	J	В

Sample No.		6				7				8				9				10		
Sample ID	W	VNC9	906		W	NC9	907		W	/NC9	908		W	NC!	9909		V	/NC	910	
Lab Sample ID	· A	B252	62		A	B25	263		A	B25	264		A	B25	265		A	B25	266	
Date of Collection	1	0/28/	99		1	0/28	/99		1	10/28	/99		1	0/29	/99		1	10/29	/99	
Units	ug/L				ug/L				ug/L				ug/L				ug/L			
Analyte	Result		Q	Cmt	Result		Q	Cmt	Result		Q	Cmt	Result		Q	Cmt	Result		Q	Cmt
Dichlorofluoromethane	5	U	J	В	5	U	J	В	5	U	J	В	5	U	J	В	5	U	J	В
1,1,2-Trichlorotrifluoroethane	5	U	J	В	5	U	J	В	5	U	J	В	5	U	J	В	5	U	J	В
Acrylonitrile	50	U	J	В	50	Ŭ	J	В	50	U	J	В	50	U	J	В	50	U	J	В
1-Bromo-2-chloroethane	5	U	J	В	5	U	J	В	5	U	J	В	5	U	J	В	5	บ	J	В

Sample No.		11				12				13				14				15		
Sample ID	W	NC9	911		W	NC9	912		W	/NC9	913		W	NC9	914		W	/NC9	915	
Lab Sample ID	A	B252	67		A	B25	268		A	B25	269		A	B25	362		A	B25	363	
Date of Collection	1	0/29/	99		1	0/29	/99		1	0/29	/99			11/1/	99			11/1/	99	
Units	ug/L				ug/L				ug/L				ug/L				ug/L			
Analyte	Result		Q	Cmt	Result		Q	Cmt	Result		Q	Cmt	Result		Q	Cmt	Result		Q	Cmt
Dichlorofluoromethane	5	U	J	В	5	บ	J	В	5	U	J	В	5	U	J	В	5	U	J	В
1,1,2-Trichlorotrifluoroethane	5	U	J	В	5	U	J	В	5	U	J	В	5	U	J	В	5	U	J	В
Acrylonitrile	50	U	J	В	50	U	J	В	50	U	J	В	50	U	J	В	50	U	J	В
1-Bromo-2-chloroethane	5	ŭ	J	В	5	U	J	В	5	บ	J	В	5	U	J	В	5	U	J	В

Sample No.		16				17				18				19)			20		
Sample ID	W	NC9	916		W	NC9	917		W	NC9	918	,	W	NC!	9919		W	NC9	920	
Lab Sample ID	A	B253	64		A	B25	365		A	B25	378		A	B25	379		A	B25	380	
Date of Collection	1	1/1/9	9			11/1/	99			11/2/	99			11/2/	99			11/2/	99	
Units	ug/L				ug/L				ug/L				ug/L				ug/L			
Analyte	Result		Q	Cmt	Result		Q	Cmt	Result		Q	Cmt	Result		Q	Cmt	Result		Q	Cmt
Dichlorofluoromethane	5	U	J	В	5	U	J	В	5	U	J	В	5	U	J	В	5	U	J	В
1,1,2-Trichlorotrifluoroethane	5	U	J	В	5	U	J	В	5	U	J	В	5	U	J	В	5	บ	J	В
Acrylonitrile	50	U	J	В	50	U	J	В	50	U	J	В	50	U	J	В	50	U	J	В
1-Bromo-2-chloroethane	5	υ	J	В	5	U	J	В	5	·U	J	В	5	U	J	В	5	U	J	В

Q-Laboratory Data Qualifiers

J-The amount detected is an estimated value.

U-This compound was analyzed for, but not detected. Cmt-See Report Narrative for Comment Cmt-See Report Narrative for Comment

Case Number: R00S05

Site: Whittier Narrows

SDG: 99300A Date: 12/03/99 Analysis:

GC/MS Volatiles

Matrix:

Water

Sample No.	Met	hod l	3lanl	ζ.	Met	hod	Blan	k	Met	hod	Blan	k	Met	hod	Blan	k	Met	hod	Blan	k
Sample ID	M	WG1	103		MO	GW1	104 <i>A</i>		MV	VH1	106A		M	WH:	1109		MY	WH1	110 <i>A</i>	.
Lab Sample ID		N/A				N/A				N/A				N/A	¥.			N/A		
Date of Collection		N/A				N/A	¥.			N/A				N/A	٨.	,		N/A	1	
Units	ug/L				ug/L				ug/L				ug/L				ug/L			1
Analyte	Result		Q	Cmt	Result		Q	Cmt	Result		Q	Cmt	Result		Q	Cmt	Result		Q	Cmt
Dichlorofluoromethane	5	U	J	В	5	U	J	В	5	U	J	В	5	U	J	В	5	U	J	В
1,1,2-Trichlorotrifluoroethane	5	U	J	В	5	U)	J	В	5	U	J	В	5	Ų	J	В	5	Ü	J	В
Acrylonitrile	50	U	J	В	50	U	J	В	50	U	J	В	50	U	J	В	50	U	J	В
1-Bromo-2-chloroethane	5	U	J	В	5	U	J	В	5	Ū	J	В	5	U	J	В	5	U	J	В

Sample No.	Met	hod I	Blan	ζ.	Met	hod	Blan	k	Sto	rage	Blan	k	Stor	age	Blan	k	Stor	rage	Blan	k
Sample ID	М	WJ1	109		М	WJ:	1110		VB	BLK	102	5	VH	BLF	C110 3	3	VH	BLF	(111)	2
Lab Sample ID		N/A				N/A	4		:	SB11	01		S	B111	1299		S	BJ11	122	
Date of Collection		N/A				N/A	4			N/A	1			N/A	A.			N/A	.	
Units	ug/L				ug/L				ug/L				ug/L				ug/L			
Analyte	Result		Q	Cmt	Result		Q	Cmt	Result		Q	Cmt	Result		Q	Cmt	Result		Q	Cmt
Dichlorofluoromethane	5	U	J	В	5	U	J	В	5	U	J	В	5	U	J	В	5	U	J	В
1,1,2-Trichlorotrifluoroethane	5	U	J	В	5	U	J	В	5	U	J	В	5	U	J	В	5	U	J	В
Acrylonitrile	50	U	J	В	50	U	J	В	50	U	J	В	50	U	J	В	50	U	J	В
1-Bromo-2-chloroethane	5	U	J	В	5	U	J	В	5	U	J	В	5	U	J	В	5	U	J	В

Sample No.	Quan	titation	
Sample ID	Li	mit	
Lab Sample ID	N	/ A	
Date of Collection	N	/A	
Units	ug/L		
Analyte	Result	Q	Cmt
Dichlorofluoromethane	5	J	В
1,1,2-Trichlorotrifluoroethane	5	J	В
Acrylonitrile	50	J	В
1-Bromo-2-chloroethane	5	J	В

Q-Laboratory Data Qualifiers

J-The amount detected is an estimated value.

U-This compound was analyzed for, but not detected. Cmt-See Report Narrative for Comment

Cmt-See Report Narrative for Comment

Operator ID: BW Date Acquired: 3 Nov 1999
Data File: C:\HPCHEM\1\DATA\991103\00G0012.D 14:46

Name: AB25195 WNC9901

Misc: 25 mL

Method: C:\HPCHEM\1\METHODS\VWG1103.M (RTE Integrator)

Title: VOA Standards for 5 point calibration

Library Searched: C:\DATABASE\NBS75K.L

TIC Top Hit	name RT			IntStd		
00G0012.D 7		Thu Nov			HP5973	

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\991104\00G0017.D

Vial: 11 Operator:

Acq On : 4 Nov 1999 15:54

: HP5973G

Sample Misc : 25 mL

: AB25196 WNC9902 Inst

Multiplr: 1.00

MS Integration Params: LSCINT.P

Quant Method: C:\HPCHEM\1\METHODS\VWG1104.M (RTE Integrator)
Title: VOA Standards for 5 point calibration

: C:\DATABASE\NBS75K.L Library

No Library Search Compounds Detected

00G0017.D VWG1104.M Thu Nov 18 11:03:12 1999 HP5973A

Operator ID: Date Acquired: 4 Nov 1999 16:41

Data File: C:\HPCHEM\1\DATA\991104\00G0018.D

Name: AB25203 WNC9903

Misc: 25 mL

Method: C:\HPCHEM\1\METHODS\VWG1104.M (RTE Integrator)

Title: VOA Standards for 5 point calibration

Library Searched: C:\DATABASE\NBS75K.L

TIC Top Hit name RT EstConc Units Area IntStd ISRT ISArea ISConc unknown 6.14 2.2 ug/L 298307 ISTD01 5.78 685679 5.0 00G0018.D VWG1104.M Thu Nov 18 11:01:22 1999 HP5973A

WMGRAM RESECUENT

Operator ID: Date Acquired: 4 Nov 1999 18:13

Data File: C:\HPCHEM\1\DATA\991104\00G0020.D

Name: AB25204 WNC9904

Misc: 25 mL

Method: C:\HPCHEM\1\METHODS\VWG1104.M (RTE Integrator)

Title: VOA Standards for 5 point calibration

Library Searched: C:\DATABASE\NBS75K.L

TIC Top Hi	t name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc
00G0020 D	VWG1104 M		Thu Nov	18 10 •	57.51	1999	HP597	3 Z	

Operator ID: HC Date Acquired: 9 Nov 1999 14:25

Data File: C:\HPCHEM\1\DATA\991109W\00J011.D

Name: AB25203dl WNC9903dl 1ml to 25ml

Misc: EM 1306, 25ml purge

Method: C:\HPCHEM\1\METHODS\VOA1109F.M (RTE Integrator)

Title: Volatile Organic Analysis - VLDL Library Searched: C:\DATABASE\NIST98.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc
unknown siloxane	14.26	0.3	ug/L	182654	ISTD03	11.63	2649970	5.0
00.T011 D VOX1109E	M	Thu Dec	02 11	19.51 1	999			

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\991104\00G0021.D

Acq On : 4 Nov 1999 18:56

Vial: 15 Operator:

Sample : AB25262 WNC9906 Inst: HP5973G

Misc : 25 mL

Multiplr: 1.00

MS Integration Params: LSCINT.P

Quant Method : C:\HPCHEM\1\METHODS\VWG1104.M (RTE Integrator)

Title : VOA Standards for 5 point calibration

Library : C:\DATABASE\NBS75K.L

No Library Search Compounds Detected

00G0021.D VWG1104.M Thu Nov 18 10:55:45 1999 HP5973A

Operator ID: HC Date Acquired: 10 Nov 1999 13:10

Data File: C:\HPCHEM\1\DATA\991110W\00J0022.D

Name: AB25263 WNC9907 Misc: EM 1306, 25ml purge

Method: C:\HPCHEM\1\METHODS\VOA1110F.M (RTE Integrator)

Title: Volatile Organic Analysis - VLDL Library Searched: C:\DATABASE\NIST98.L

TIC Top Hit name RT EstConc Units Area IntStd ISRT ISArea ISConc Carbon dioxide 1.44 118.1 ug/L 11572300 ISTD01 5.74 490014 5.0 00J0022.D VOA1110F.M Thu Dec 02 11:28:21 1999

Operator ID: HC Date Acquired: 9 Nov 1999 19:53

Data File: C:\HPCHEM\1\DATA\991109W\00J018.D

Name: AB25264 WNC9908 Misc: EM 1306, 25ml purge

Method: C:\HPCHEM\1\METHODS\VOA1109F.M (RTE Integrator)

Title: Volatile Organic Analysis - VLDL Library Searched: C:\DATABASE\NIST98.L

TIC Top Hit name RT EstConc Units Area IntStd ISRT ISArea ISConc

00J018.D VOA1109F.M Thu Dec 02 11:31:42 1999

Operator ID: EBC Date Acquired: 6 Nov 1999 15:34

Data File: C:\HPCHEM\1\DATA\110699W\OOH0120.D

Name: AB25265 WNC9909 Misc: EM1212, 1uL ISA037,

Method: C:\HPCHEM\1\METHODS\VWH1106A.M (RTE Integrator)

Title: Volatile Organic Analysis - R9LAB305 25ml

Library Searched: C:\DATABASE\NIST98.L

TIC Top Hit name RT EstConc Units Area IntStd ISRT ISArea ISConc
OOH0120.D VWH1106A.M Mon Nov 08 13:36:19 1999

Operator ID: EBC Date Acquired: 6 Nov 1999 16:19

Data File: C:\HPCHEM\1\DATA\110699W\OOH0121.D

Name: AB25266 WNC9910 Misc: EM1212, 1uL ISA037,

Method: C:\HPCHEM\1\METHODS\VWH1106A.M (RTE Integrator)

Title: Volatile Organic Analysis - R9LAB305 25ml

Library Searched: C:\DATABASE\NIST98.L

TIC Top Hit name RT EstConc Units Area IntStd ISRT ISArea ISConc

OOH0121.D VWH1106A.M Mon Nov 08 13:43:46 1999

Operator ID: EBC Date Acquired: 6 Nov 1999 17:04

Data File: C:\HPCHEM\1\DATA\110699W\OOH0122.D

Name: AB25267 WNC9911 Misc: EM1212, 1uL ISA037,

Method: C:\HPCHEM\1\METHODS\VWH1106A.M (RTE Integrator)

Title: Volatile Organic Analysis - R9LAB305 25ml

Library Searched: C:\DATABASE\NIST98.L

TIC Top Hit name RT EstConc Units Area IntStd ISRT ISArea ISConc

OOH0122.D VWH1106A.M Mon Nov 08 13:50:28 1999

Operator ID: EBC Date Acquired: 6 Nov 1999 17:50

Data File: C:\HPCHEM\1\DATA\110699W\OOH0123.D

Namē: AB25268 WNC9912 Misc: EM1212, 1uL ISA037,

Method: C:\HPCHEM\1\METHODS\VWH1106A.M (RTE Integrator)

Title: Volatile Organic Analysis - R9LAB305 25ml

Library Searched: C:\DATABASE\NIST98.L

TIC Top Hit name RT EstConc Units Area IntStd ISRT ISArea ISConc

OOH0123.D VWH1106A.M Mon Nov 08 13:57:20 1999

Operator ID: MCND Date Acquired: 9 Nov 1999 21:45

Data File: C:\HPCHEM\1\DATA\110999W\00H0136.D

Name: AB25269 WNC9913

Misc: EM1353, 1uL ISA037, 1uL SAS259

Method: C:\HPCHEM\1\METHODS\VWH1109.M (RTE Integrator)

Title: Volatile Organic Analysis - R9LAB305 25ml

Library Searched: C:\DATABASE\NIST98.L

TIC Top Hit name RT EstConc Units Area IntStd TSRT ISArea ISConc

00H0136.D VWH1109.M Wed Nov 10 07:33:31 1999

Operator ID: MCND Date Acquired: 9 Nov 1999 22:30

Data File: C:\HPCHEM\1\DATA\110999W\00H0137.D

Name: AB25362 WNC9914 Misc: EM1353, 1uL ISA037, 1uL SAS259

Method: C:\HPCHEM\1\METHODS\VWH1109.M (RTE Integrator)

Title: Volatile Organic Analysis - R9LAB305 25ml

Library Searched: C:\DATABASE\NIST98.L

TIC Top Hit name RT EstConc Units Area IntStd ISRT ISArea ISConc

00H0137.D VWH1109.M Wed Nov 10 07:44:47 1999

Operator ID: MCND Date Acquired: 9 Nov 1999 23:16

Data File: C:\HPCHEM\1\DATA\110999W\00H0138.D

Name: AB25363 WNC9915

Misc: EM1353, 1uL ISA037, 1uL SAS259

Method: C:\HPCHEM\1\METHODS\VWH1109.M (RTE Integrator)

Title: Volatile Organic Analysis - R9LAB305 25ml

Library Searched: C:\DATABASE\NIST98.L

TIC Top Hit name RT EstConc Units Area IntStd ISRT ISArea ISConc

00H0138.D VWH1109.M Wed Nov 10 08:04:00 1999

Operator ID: EBC Date Acquired: 6 Nov 1999 18:35

Data File: C:\HPCHEM\1\DATA\110699W\OOH0124.D

Name: AB25364 WNC9916 Misc: EM1212, 1uL ISA037,

Method: C:\HPCHEM\1\METHODS\VWH1106A.M (RTE Integrator)

Title: Volatile Organic Analysis - R9LAB305 25ml

Library Searched: C:\DATABASE\NIST98.L

TIC Top Hit name	RT	EstConc Units	Area	IntStd	ISRT	ISArea ISConc
OOU0124 D MMU11067	M	Mon Nov 09 14	.01.11	1000		

Operator ID: EBC Date Acquired: 6 Nov 1999 19:20

Data File: C:\HPCHEM\1\DATA\110699W\OOH0125.D

Name: AB25365 WNC9917 Misc: EM1212, 1uL ISA037,

Method: C:\HPCHEM\1\METHODS\VWH1106A.M (RTE Integrator)

Title: Volatile Organic Analysis - R9LAB305 25ml

Library Searched: C:\DATABASE\NIST98.L

TIC Top Hit name RT EstConc Units Area IntStd ISRT ISArea ISConc

OOH0125.D VWH1106A.M Mon Nov 08 14:08:00 1999

Operator ID: EBC Date Acquired: 6 Nov 1999 20:06

Data File: C:\HPCHEM\1\DATA\110699W\00H0126.D

Name: AB25378 WNC9918 Misc: EM1212, 1uL ISA037,

Method: C:\HPCHEM\1\METHODS\VWH1106A.M (RTE Integrator)

Title: Volatile Organic Analysis - R9LAB305 25ml

Library Searched: C:\DATABASE\NIST98.L

TIC Top Hit name RT EstConc Units Area IntStd ISRT ISArea ISConc

OOH0126.D VWH1106A.M Mon Nov 08 14:14:02 1999

Operator ID: EBC Date Acquired: 6 Nov 1999 20:51

Data File: C:\HPCHEM\1\DATA\110699W\OOH0127.D

Name: AB25379 WNC9919 Misc: EM1212, 1uL ISA037,

Method: C:\HPCHEM\1\METHODS\VWH1106A.M (RTE Integrator)

Title: Volatile Organic Analysis - R9LAB305 25ml Library Searched: C:\DATABASE\NIST98.L

TIC Top Hi	t name	RT	EstConc	Unit	s Area	IntStd	ISRT	ISArea	ISConc
					,				
OOU0127 D	TWILLIAGN M		Mon Not	z ΩΩ	14.22.11	1999			

Operator ID: MCND Date Acquired: 10 Nov 1999 00:01

Data File: C:\HPCHEM\1\DATA\110999W\00H0139.D

Name: AB25380 WNC9920

Misc: EM1353, 1uL ISA037, 1uL SAS259

Method: C:\HPCHEM\1\METHODS\VWH1109.M (RTE Integrator)

Title: Volatile Organic Analysis - R9LAB305 25ml

Library Searched: C:\DATABASE\NIST98.L

TIC Top Hit name RT EstConc Units Area IntStd ISRT ISArea ISConc

00H0139.D VWH1109.M Wed Nov 10 08:45:33 1999

USEPA REGION 9 LABORATORY REPORT NARRATIVE

CASE NUMBER:

SAMPLE DELIVERY GROUP:

PROGRAM:

DOCUMENT CONTROL #:

DATE:

ANALYSIS:

R00S05

99300A

SUPERFUND.

ESTW-9B-2709

11/30/99

FLUORIDE, CHLORIDE, NITRITE AS

NITROGEN, NITRATE AS NITROGEN, SULFATE

AND PERCHLORATE

SAMPLE NUMBERS:

SAMPLE ID	LABORATORY SAMPLE ID
WNC9901	AB25195
WNC9902	AB25196
WNC9903	AB25203
WNC9904	AB25204
WNC9905	AB25261
WNC9906	AB25262
WNC9907	AB25263
WNC9908	AB25264
WNC9909	AB25265
WNC9910	AB25266
WNC9911	AB25267
WNC9912	AB25268 ·
WNC9913	AB25269
WNC9914	AB25362
WNC9915	AB25363
WNC9916	AB25364
WNC9917	AB26365
WNC9918	AB26378
WNC9919	AB25379
WNC9920	AB25380

GENERAL COMMENTS

Twenty water samples were received from the Whittier Narrows Comprehensive Superfund project on 10/27/99, 10/28/99, 10/29/99, 10/30/99, 11/2/99 and 11/3/99.

The requested analyses were fluoride, chloride, nitrite as nitrogen, nitrate as nitrogen and sulfate (EPA Method 300.0) and perchlorate (Region 9 Laboratory SOP 531). All samples were analyzed within the required holding times.

The nitrite-N quantitation limit was raised to 0.5 mg/L for samples with chloride levels above 25 mg/L due to interference from the chloride peak masking the presence of nitrite at low concentrations.

SAMPLE RECEIPT AND PRESERVATION

Samples WNC9914, WNC9915, WNC9916 and WNC9917 were received at a temperature of 9°C on 11/02/99. All custody seals were intact.

QA/QC SUMMARY

No analytes were detected in the blanks associated with this SDG.

Chloride and sulfate concentrations in QC sample WNC9905 and sulfate concentrations in QC sample WNC9901 were greater than 4 times the added spike. No LFM recoveries were calculated for the affected analytes. All other LFM recoveries were within the QC limits.

The RPDs for all duplicates were less than or equal to the 20% QC limit for all analytes where the sample result was greater than or equal to 5 times the quantitation limit. For analytes where the sample result was less than 5 times the quantitation limit the difference between the duplicates was less than the quantitation limit.

All LFB recoveries were within the QC limits.

Questions concerning the data can be answered by Patrick Hirata at (510) 412-2354.

Laboratory Reagent Blanks (LRB)

A laboratory reagent blank is laboratory reagent water or baked sand with all reagents added and carried through the same sample preparation and analytical procedures as the field samples. The laboratory reagent blank is used to determine the level of contamination introduced by the laboratory during analysis.

Laboratory Fortified Matrix and Laboratory Duplicate Analysis

The laboratory fortified matrix spike sample and laboratory duplicate analyses provide information about the effect of the sample matrix on sample preparation and measurement. Poor percent recovery (%R) results and large relative percent difference (RPD) between duplicates may indicate inconsistent laboratory technique, sample nonhomogeneity in soils, or matrix effects which may interfere with analysis.

Laboratory Fortified Blank (LFB) Analysis

The laboratory fortified blank is laboratory reagent water or baked sand with a known concentration of the analytes of interest added by the laboratory with all reagents added and carried through the same sample preparation and analytical procedures as the field samples. Poor percent recovery (%R) results may indicate inconsistent laboratory technique.

Case Number:

R00S05

Analysis:

Anions and Perchlorate

Site: SDG: Whittier Narrows Comprehensive 99300A

Matrix:

Water

Date:

11/30/99

Station Location Sample I.D. Lab Sample I.D. Date of Collection	1 WNC9901 AB25195 10/26/99				2 WNC990 AB25196 10/26/99	5			3 WNC9903 AB25203 10/27/99				4 WNC9904 AB25204 10/27/99			,	5 WNC9905 AB25261 10/28/99				6 WNC9906 AB25262 10/28/99	1-5	?	
Analyte	Result		Q	Com	Result		Q	Com	Result		Q	Com	Result		Q	Com	Result		Q	Com	Result		Q	Com
Fluoride (mg/L)	0.6				0.1	U			0.7				0.1	υ			0.3				0.3			
Chloride (mg/L)	28				1				31 -				11				54	,			'37			
Sulfate (mg/L)	91				1				140				0.9		J		220				110			
Nitrite-N (mg/L)	0.5	U			0.1	ប			0.5	Ü		-	0.1	Ŭ			1	U			0.5	U		
Nitrate-N (mg/L)	5.3				0.1	U			7.7				0.1	Ŭ			5.1				3.1			
Perchlorate (ug/L)	3		J		5	U			5	U			5	Ŭ			5 ·	U			5			

Com - Comments refer to the corresponding section in the report narrative for each letter.

N/A - Not Applicable.

N/R - Not Required.

Q - Refer to data qualifiers.

U - The parameter was analyzed for, but was not detected; The associated value is the sample detection limit, adjusted for dilution, if any.

J - The associated value is an estimated quantity.

J - The associated value is	an obtimated quan				·				·····															
Station Location	7 .			1	8				9				10				11				12			
Sample I.D.	WNC9907				WNC9908				WNC9909)			WNC9910				WNC9911				WNC9912			
Lab Sample I.D.	AB25263				AB25264				AB25265				AB25266				AB25267				AB25268			İ
Date of Collection	10/28/99				10/28/99				10/29/99				10/29/99				10/29/99				10/29/99			
Analyte	Result		Q	Com	Result		Q	Com	Result		Q	Com	Result		Q	Com	Result		Q	Com	Result		Q	Com
Fluoride (mg/L)	0.3				0.1	υ			0.2				0.5				0.1	U			0.4			
Chloride (mg/L)	37				1		:		45				46				1				48		1	
Sulfate (mg/L)	110				1				180				160				1				300			
Nitrite-N (mg/L)	0.5	U		1,	0.1	U	1		0.5	Ü			0.5	υ		r	1.0	U			0.5	Ü		
Nitrate-N (mg/L)	3.1				0.1	υ			5.9				3.9				0.1	U			7.6			
Perchlorate (ug/L)	4		J		5	U			5	υ			5	U			5	U			5	υ		

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N/A - Not Applicable.

N/R - Not Required.

O - Refer to data qualifiers.

U - The parameter was analyzed for, but was not detected; The associated value is the sample detection limit, adjusted for dilution, if any.

J - The associated value is an estimated quantity.

Filename: 99300AG.WK4

Case Number:

Date:

R00S05

Whittier Narrows Comprehensive

Analysis:

Anions and Perchlorate

Water

Site: 99300A SDG:

Matrix: 11/30/99

Station Location Sample I.D. Lab Sample I.D. Date of Collection	13 WNC9913 AB25269 10/29/99	L	(7	Z	14 WNC9914 AB25362 11/01/99	3	۔2۔	-	15 WNC9915 AB25363 11/01/99	3-	3 		16 WNC9916 AB25364 11/01/99	3.	4	í	17 WNC9917 AB25365 11/01/99				18 WNC9918 AB25378 11/02/99	5~	2	
Analyte	Result		Q	Com	Result		Q	Com	Result		Q	Com	Result		Q	Com	Result		Q	Com	Result		Q	Com
Fluoride (mg/L)	0.4				0.6				0.7		ļ. —		0.4				0.1	Ŭ			0.3			
Chloride (mg/L)	48				33	7			44				38				1				26			
Sulfate (mg/L)	300				100				180				210				1				83			
Nitrite-N (mg/L)	0.5	U			0.5	Ŭ			0.5	U			0.5	U			0.1	U			0.5	U		
Nitrate-N (mg/L)	7.5				3.6				5.8				8.8				0.1	U			2.8			
Perchlorate (ug/L)	3		J		3		J		4		J		5	υ			5	U			3		J	

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N/A - Not Applicable.

N/R - Not Required.

Q - Refer to data qualifiers.

U - The parameter was analyzed for, but was not detected; The associated value is the sample detection limit, adjusted for dilution, if any.

J - The associated value is an estimated quantity.

Station Location	19			20			····	N/A				N/A				N/A				N/A			
Sample I.D.	WNC9919			WNC9920				Reagent Blank				Reagent Blank				Reagent Blank				Reagent Blank			
Lab Sample I.D.	AB25379			AB25380				N/A				N/A				N/A				N/A			
Date of Collection	11/02/99			11/02/99				N/A				N/A				N/A				N/A			
Analyte	Result	Q	Com	Result		Q	Com	Result		Q	Com	Result		Q	Com	Result		Q	Com	Result		Q	Com
Fluoride (mg/L)	0,3		-	0.1 U	J			0.1	U			0.1	U			0.1	Ū			0.1	U		
Chloride (mg/L)	39			1	5		14	1	U		l :	1	U		1	1	บ			1	U		
Sulfate (mg/L)	170			1	\Box			1	U		Ι	1	U			1	U			1	U		
Nitrite-N (mg/L)	0.5 U			0.1 t	j		:	0.1	บ			0.1	U			0.1	ŭ			0.1	U		
Nitrate-N (mg/L)	7.0			0.1 U	ŢΤ			0.1	U		•	0.1	U			0.1	U			0.1	U		
Perchlorate (ug/L)	5 U			5 t	7			5	U							all all							

Com - Comments refer to the corresponding section in the report narrative for each letter.

N/A - Not Applicable.

N/R - Not Required.

U - The parameter was analyzed for, but was not detected; The associated value is the sample detection limit, adjusted for dilution, if any.

J - The associated value is an estimated quantity.

Filename: 99300AG.WK4

Case Number:

R00S05

Whittier Narrows Comprehensive

Site: SDG: Date:

99300A 11/30/99 Analysis: Anions and Perchlorate

Matrix:

Water

Station Location Sample I.D. Lab Sample I.D. Date of Collection	N/A Reagent I N/A N/A	Blank			N/A Reagent Bla N/A N/A	ınk				Quantitation Limit N/A N/A			Quantitation Limit N/A N/A
Analyte	Resu	t	Q	Com	Result			Q	Com	Result	<u> </u>		Result
Flouride (mg/L)	0.1	U	ļ		0.1		Ū			0.1			
Chloride (mg/L)	1	Ŭ			1	il	Ü	<u>l</u>		1			
Sulfate (mg/L)	1	Ŭ			1		U			1			
Nitrite-N (mg/L)	0.1	U			0.1	1	Ū	н1		0.1			0.5
Nitrate-N (mg/L)	0.1	U			0.1		U			0.1			
Perchlorate (ug/L)	1				-					5			

Com - Comments refer to the corresponding section in the report narrative for each letter.

N/A - Not Applicable.

N/R - Not Required.

Q - Refer to data qualifiers.

U - The parameter was analyzed for, but was not detected; The associated value is the sample detection limit, adjusted for dilution, if any.

J - The associated value is an estimated quantity.

Filename: 99300AG.WK4

USEPA REGION 9 LABORATORY REPORT NARRATIVE

CASE NUMBER:

R00S05

SAMPLE DELIVERY GROUP:

99300A

PROGRAM:

Superfund

DOCUMENT CONTROL #:

ESTW-9B-2747

ANALYSIS PERFORMED:

1.4-dioxane

DATE SUBMITTED:

December 2, 1999

SAMPLE NUMBERS:

	Laboratory		Laboratory
Sample ID	Sample ID	Sample ID	Sample ID
WNC9901	AB25195	WNC9902	AB25196
WNC9903	AB25203	WNC9904	AB25204
WNC9905	AB25261	WNC9906	AB25262
WNC9907	AB25263	WNC9908	AB25264
WNC9909	AB25265	WNC9910	AB25266
WNC9911	AB25267	WNC9912	AB25268
WNC9913	AB25269	WNC9914	AB25362
WNC9915 .	AB25363	.WNC9916	AB25364
WNC9917	AB25365	WNC9918	AB25378
WNC9919	AB25379	WNC9920	AB25380

GENERAL COMMENTS

Twenty (20) water samples were received at the EPA Region 9 Laboratory from 10/27/99 through 11/03/99 from the Whittier Narrows Comprehensive project.

These samples were analyzed for 1,4-dioxane in accordance with the USEPA Region 9 Laboratory SOP 307, 1,4-Dioxane Anlaysis.

SAMPLE RECEIPT AND PRESERVATION

The cooler temperature associated with the following samples was outside of the 2 - 6 ° C temperature range:

Sample ID	Lab Sample ID	Date Collected	Date Received	Cooler Temp
WNC9914	AB25362	11/1/99	11/1/99	. 9 ° C
WNC9915	AB25363	11/1/99	11/1/99	9 ° C
WNC9916	AB25364	11/1/99	11/1/99	9 ° C
WNC9917	AB25363	11/1/99	11/1/99	9 ° C

QA/QC AND ANALYTICAL COMMENTS

The following comment appears on the Summary of Analytical Results:

A The amount detected is less than the quantitation limit, and is an estimated value.

No 1,4-dioxane was detected in the method blanks associated with these samples.

All MS/MSD results were within QC limits.

All internal standard areas and retention times were within QC limits.

All LCS results were within QC limits.

All samples were analyzed within the holding time. The holding time for water samples is 14 days if preserved to a pH of less than or equal to 2 or 7 days if the sample is not acid preserved.

RESULTS SUMMARY

The results can be found on the Summary of Results report.

Any questions in reference to this data package may be addressed to Joseph Naughten at (510) 412-2358.

Glossary of Terms:

Method Blanks

A laboratory method blank is laboratory reagent water or sand with all reagents, surrogates, and internal standards added and carried through the same sample preparation and analytical procedures as the field samples. The laboratory method blank is used to determine the level of contamination introduced by the laboratory during analysis.

Storage Blanks

A storage blank is laboratory reagent water that is stored in the laboratory refrigerator for one week. All reagents, surrogates, and internal standards are added at the time of analysis and it is processed through the same sample preparation and analytical procedures as the other blanks. The storage blank is used to determine the level of contamination introduced by the laboratory during sample storage.

Surrogates

Surrogates are organic compounds which are similar to the target analytes in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples. All samples are spiked with surrogate compounds prior to analysis. Surrogate percent recovery (%R) provides information about both the laboratory performance on individual samples and the possible effects of the sample matrix on the analytical results.

Matrix Spike and Spike Duplicate Analysis

Matrix spike sample and spike duplicate analyses provide information about the effect of the sample matrix on sample preparation and measurement. Poor percent recovery (%R) results and large relative percent difference (RPD) between duplicates may indicate inconsistent laboratory technique, sample nonhomogeneity in soils, or matrix effects which may interfere with analysis.

Internal Standards

Internal standards are organic compounds which are similar to the target analytes in chemical composition and behavior in the analytical process, but not normally found in environmental samples. All samples are spiked with internal standard compounds prior to analysis. Internal standard recoveries and retention times provide information about both the instrument performance on individual samples and the possible effects of the sample matrix on the analytical results.

Laboratory Control Samples

Laboratory control samples (LCSs) are analyzed daily to demonstrate comparability of the continuing calibration standard. It is equivalent to the continuing calibration standard, but it is obtained from an independent source.

Case Number: R00S05

Site: Whittier Narrows Comprehensive

Analysis:

1,4-dioxane

SDG: 99300A

Date: 12/02/99

Matrix: Water

Sample No.																	
Sample ID	W	NC9	901		V	VNC9	902		W	/NC990	3	V	VNC990	14	l v	VNC990	5
Lab Sample ID	A	B25	195		A	AB251	96		,A	B25203		A	AB2520	4 ,	l A	AB25261	
Date of Collection	1	0/26	/99		:	10/26/	99		1	0/27/99			10/27/99	•	1	10/28/99	
Units	ug/L				ug/L				ug/L			ug/L			ug/L		
Analyte	Result		Q	Cmt	Result		Q	Cmt	Result	Q	Cmt	Result		Cmt	Result	Q	Cmt
1,4-dioxane	5	U			5	U			5	U		5	U		5	U .	

Sample No.																				
Sample ID	v	VNC	9906		1	VNC	9907		W	NC9	908		W	NC99	09		W	/NC9	910	
Lab Sample ID	1	AB25	262			AB25	263		A	B252	64		A	B252	65		A	B25	266	
Date of Collection		10/28	/99			10/28	/99		1	0/28/	99		1	0/29/9	9		. 1	0/29	/99	
Units	ug/L				ug/L				ug/L				ug/L				ug/L			
Analyte	Result		Q	Cmt	Result		Q	Cmt	Result		Q	Cmt	Result		Q	Cmt	Result		Q	Cmt
1,4-dioxane	5	U			5	U			5	U			5	U			5	U		

Sample No.									,	-							
Sample ID	V	VNC9	911		WN	C9912		W	NC9913		V	NC9	9914		W	NC9915	
Lab Sample ID	Į A	AB25	267		AF	325268		A	B25269		A	B25	362		A	B25363	
Date of Collection	1	10/29	/99		10	/29/99	:	1	0/29/99	_ :		11/1/	99		1	1/1/99	,
Units	ug/L				ug/L			ug/L	47	2	ug/L				ug/L	3~~	5
Analyte	Result		Q	Cmt	Result	Q	Cmt	Result	Q	Cmt	Result		Q	Cmt	Result	Q	Cmt
1,4-dioxane	5	U			4	J	Α	7			5	U			3	J	Α

Sample No.	1														
Sample ID	WN	C9916		W	NC9917		W	/NC9918	;	W	/NC9919		W	NC992)
Lab Sample ID	AE	25364		A	B25365		A	B25378		A	B25379		A	B25380	
Date of Collection	11	/1/99	,		11/1/99			11/2/99			11/2/99			11/2/99	
Units	ug/L	ع_ر	(ug/L			ug/L			ug/L			ug/L		
Analyte	Result	- Q	Cmt	Result	Q	Cmt	Result	Q	Cmt	Result	Q	Cmt	Result	Q	Cmt
1,4-dioxane	3	J	Α	5	U		5	U		5	U		5	U	

Sample No.	Method			Method				Method]	Method						
Sample ID	Blank				Blank				Blank					Blank					
Lab Sample ID	MWA1102				MWA1103				MWA1104			MXF1103A			MXF1104B				
Date of Collection	n/a				n/a				n/a			n/a			n/a				
Units	ug/L				ug/L				uġ/L				ug/L			ug/L			
Analyte	Result		Q	Cmt	Result		Q	Cmt	Result		Q	Cmt	Result	Q	Cmt	Result		\mathbf{Q}	Cmt
1,4-dioxane	5	U			5	U			5	U			5	U		5	U		

Sample No.	Method			Storage Blank												
Sample ID		VH	BLK	(110	3											
Lab Sample ID	M	SB1118														
Date of Collection		n/a														
Units	ug/L			ug/L				ug/L			ug/L			ug/L		
Analyte	Result	(Q Cmt	Result		Q	Cmt	Result	Q	Cmt	Result	Q	Cmt	Result	Q	Cmt
1.4-dioxane	5	U		5	U											

Q-Laboratory Data Qualifiers

U-This compound was analyzed for, but not detected.

J-The amount detected is an estimated value.

Cmt-See Report Narrative for Comment